RACAL INSTRUMENTS™
1260-54
TREE MULTIPLEXER
MODULE

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All Astronics Test Systems products are designed to exacting standards and manufactured in full compliance to our AS9100 Quality Management System processes.

This warranty does not apply to defects resulting from any modification(s) of any product or part without Astronics Test Systems express written consent, or misuse of any product or part. The warranty also does not apply to fuses, software, non-rechargeable batteries, damage from battery leakage, or problems arising from normal wear, such as mechanical relay life, or failure to follow instructions.

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2. Product model number
3. Your company and contact information

You may contact Customer Support by:

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Telephone:	+1 800 722 3262	(USA)
Fax:	+1 949 859 7139	(USA)

RETURN OF PRODUCT

Authorization is required from Astronics Test Systems before you send us your product or sub-assembly for service or calibration. Call or contact Customer Support at 1-800-722-3262 or 1-949-859-8999 or via fax at 1-949-859-7139. We can also be reached at: atshelpdesk@astronics.com.

If the original packing material is unavailable, ship the product or sub-assembly in an ESD shielding bag and use appropriate packing materials to surround and protect the product.

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FOR YOUR SAFETY

Before undertaking any troubleshooting, maintenance or exploratory procedure, read carefully the **WARNINGS** and **CAUTION** notices.

This equipment contains voltage hazardous to human life and safety, and is capable of inflicting personal injury.

If this instrument is to be powered from the AC line (mains) through an autotransformer, ensure the common connector is connected to the neutral (earth pole) of the power supply.

Before operating the unit, ensure the conductor (green wire) is connected to the ground (earth) conductor of the power outlet. Do not use a two-conductor extension cord or a three-prong/two-prong adapter. This will defeat the protective feature of the third conductor in the power cord.

Maintenance and calibration procedures sometimes call for operation of the unit with power applied and protective covers removed. Read the procedures and heed warnings to avoid “live” circuit points.

Before operating this instrument:

1. Ensure the proper fuse is in place for the power source to operate.

2. Ensure all other devices connected to or in proximity to this instrument are properly grounded or connected to the protective third-wire earth ground.

If the instrument:

- fails to operate satisfactorily
- shows visible damage
- has been stored under unfavorable conditions
- has sustained stress

Do not operate until performance is checked by qualified personnel.

EC Declaration of Conformity

We

Astronics Test Systems
4 Goodyear
Irvine, CA

declare under sole responsibility that the

1260-54 Tree Multiplexer Module
P/N 404768

conforms to the following Product Specifications:

Safety: EN 61010-1

EMC: CISPR 11:1990/EN 55011 (1991): Group 1 Class A
IEC 801-2:1991/EN 50082-1 (1992): 4 kV CD, 8 kV AD
IEC 801-3:1984/EN 50082-1 (1992): 3 V/m, 27-500 MHz
IEC 801-4:1988/EN 50082-1 (1992): 1 kV

Supplementary Information:

The above specifications are met when the product is installed in an Astronics Test Systems certified mainframe with faceplates installed over all unused slots, as applicable.

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC.

Irvine, CA, January 24, 1996

Quality Manager

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NOTE FOR SYSTEMS WITH 1260-OPT 01T

The “Module-Specific Syntax” section of this manual shows the command syntax for the 1260-01S Smart Card. If you are using the newer 1260-01T Smart Card, the commands will NOT work as shown.

Consult the 1260-01T Manual for a description of the commands which may be used with the 1260-01T Smart Card.

The channel numbers described in this manual are valid for the 1260-01T. The channel numbers continue to be used for the 1260-01T.

The syntax of the commands which use channel numbers has changed for those cards controlled by the 1260-01T.

The new syntax used to close a channel is:

CLOSE (@ <module address> (<channel>))

For example, with for a relay module whose <module address> is set to 7, closing <channel> 0 is performed with the command:

CLOSE (@ 7 (0))

Using the older 1260-01S, the command would be (as shown in this manual):

CLOSE 7.0

Many other command syntax differences exist. Please consult chapter 2 of the 1260-01T manual for a description of the commands which are available for the 1260-01T.

Control Information for the 1260-54

The following information describes the control-register-to-relay-channel mapping for a 1260-54 Relay Module. This information may be used to control a 1260-54 when using a 1260-01T in the register-based mode of operation.

A channel within each 1x4 MUX may be selected by programming either 1 or 2 Control Registers. Selecting one channel in each MUX will open all others in that MUX.

Each Control Register is located 2 addresses from the previous Control Register. That is, each Control Register is located at an odd address. This is shown in Table 2-2 of the 1260-01T manual. Control Register 0 is located at the "Base A24 Address" for the module. Consult the "Register-Based Operation" Section of Chapter 2 of the 1260-01T manual for a description of calculating control register addresses.

Each Control Register may also control several different MUXes. For this reason it is necessary to form the new Control Register values by performing the following steps:

- Read the present Control Register values
- Invert the Control Register value (the hardware inverts the present value on reading)
- AND the present data with an AND mask from the table below
- OR the present data with the OR mask from the table below.

For example, from the table below, to select channel 10 (MUX #1, channel 0 to COM), we must write to both Control Register #0 and Control Register #1. The Control Register #0 AND mask is 3F (hexadecimal), while the Control Register #1 AND mask is F0 (hexadecimal). Similarly, the Control Register #0 OR mask is 40 (hexadecimal), while the Control Register #1 OR mask is 0C (hexadecimal). Therefore, to select channel 10, perform the following sequence of operations:

- Read the present value of Control Register #0
- Perform a 1's complement (invert) of each of the bits of this register
- AND the value with 3F hexadecimal, clearing the most significant 2 bits
- OR the value with 40 hexadecimal
- Write the value just created back to Control Register #0
- Read the present value of Control Register #1
- AND the value with F0 hexadecimal, clearing the least significant 4 bits
- OR the value with 0C hexadecimal
- Write the value just created back to Control Regster #1

In 'C', this can be represented (using ViIn8() and ViOut8() to write) as follows:

```
ViAddr control_reg_0, control_reg_1;
ViUInt8 creg0_val, creg1_val;
ViStatus error;
ViSession hdl;          /* this is from the viOpen() function */

control_reg_0 = (module address of card x 0x400) + 1;
control_reg_1 = control_reg_0 + 2;
```

```
error = ViIn8(hdl, control_reg_0, &creg0_val);
creg0_val = ~ creg0_val;      /* invert the data read back */
creg0_val &= 0x3F;            /* AND with 3F hex */
creg0_val |= 0x40;            /* OR with 40  hex */
error = viOut8(hdl, control_reg_0, creg0_val);

error = ViIn8(hdl, control_reg_1, &creg1_val);
creg1_val = ~ creg1_val;      /* invert the data read back */
creg1_val &= 0xF0;            /* AND with F0 hex */
creg1_val |= 0x0C;            /* OR with 0C hex */
error = Out8(hdl, control_reg_1, creg1_val);
```

Note that for each MUX, using a value of 0 for the OR mask for all Control Registers used for that MUX will open ALL 4 channels of that MUX.

The table below shows the mapping from logical channels to control bits. The logical channels are used when operating the relay module in message-based mode. The control bits within the Control Registers are used to operate the module in register-based mode. The table shows holds one or two entries, showing the Control Register, the AND mask, and the OR mask to use to select the desired MUX relay closures.

Channel	Control Register	AND Mask (hex)	OR Mask (hex)
00	0	C0	31
01	0	C0	22
02	0	C0	14
03	0	C0	08
10	0 1	3F F0	40 0C
11	0 1	3F F0	80 08
12	0 1	3F F0	00 05
13	0 1	3F F0	00 02
20	1 2	0F FC	10 03
21	1 2	0F FC	20 02
22	1 2	0F FC	40 01
23	1 2	0F FC	80 00
30	2	03	C4
31	2	03	88
32	2	03	50
33	2	03	20
40	3	C0	31
41	3	C0	22
42	3	C0	14
43	3	C0	08
50	3 4	3F F0	40 0C
51	3 4	3F F0	80 08
52	3 4	3F F0	00 05
53	3 4	3F F0	00 02

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DOCUMENT CHANGE HISTORY

Revision	Date	Description of Change
A	01/18/10	Revised per EO 30017 Revised format to current standards. Company name revised throughout manual. Manual now revision letter controlled. Added Document Change History Page iii. Back of cover sheet. Revised Warranty Statement, Return of Product, Proprietary Notice and Disclaimer to current standards. (Chap2-1) Unpacking and inspection. Revise to current standards. Removed Reshipment Instructions in (Chap. 2-1) and removed (Chap 5). Information. Now appears in first 2 sheets behind cover sheet. Updated table of contents to reflect changes made. . Added company name o footer opposite of Page no's i thru iv.

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Chapter 1
INTRODUCTION

1260-54 1GHz Tree Multiplexer Module

The 1260-54 provides six 1 x 4 tree multiplexers. Each channel has the capability of being terminated into an optional 50Ω SMB terminator.

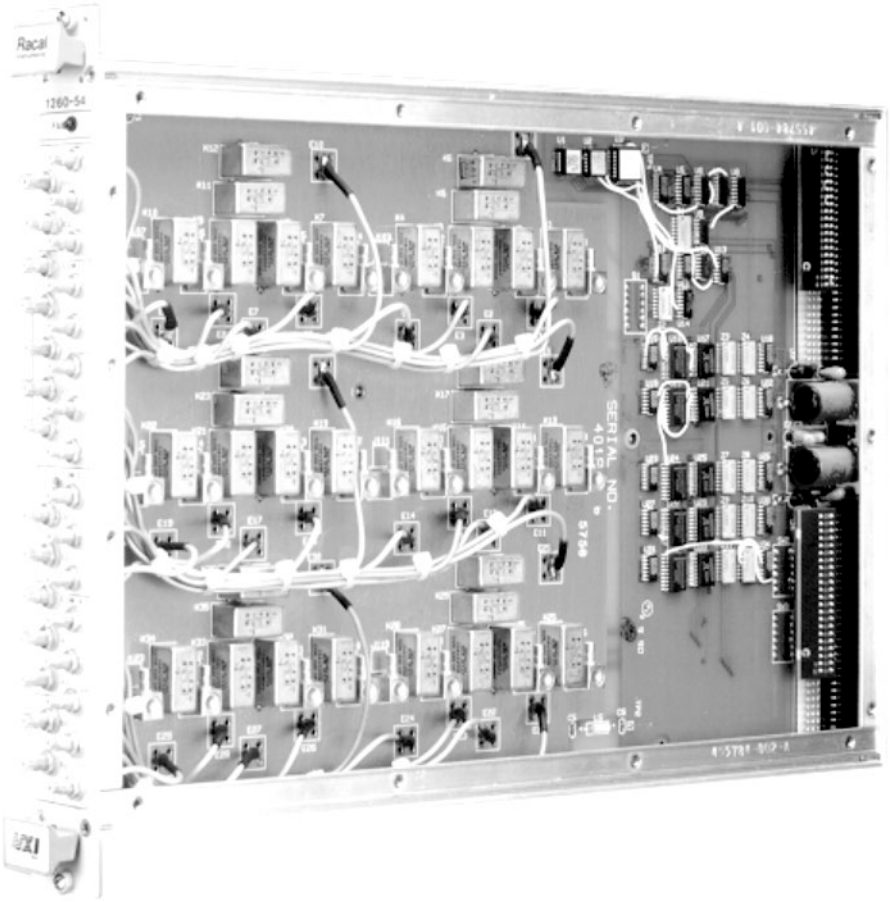

Figure 1-1, 1260-54

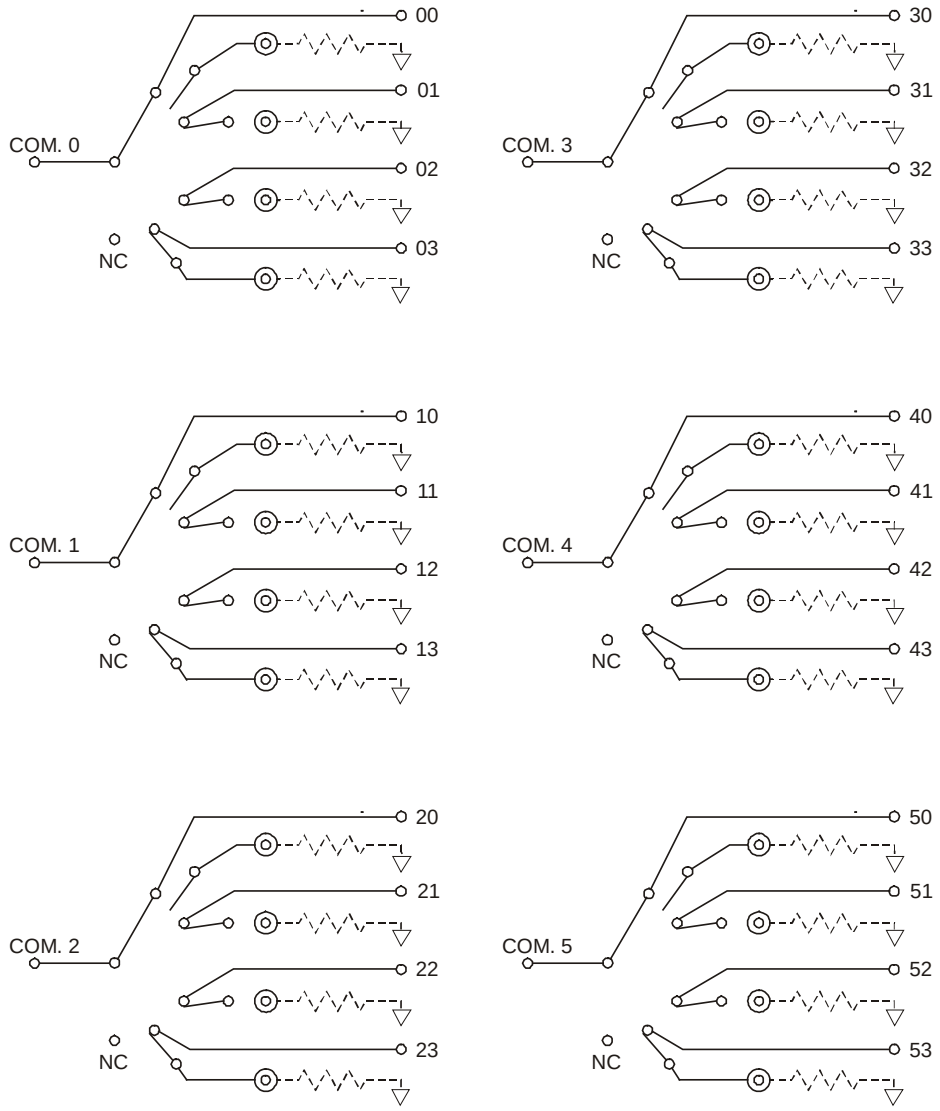

Figure 1-2, 1260-54 Functional Diagram

Specifications

Minimum Option 01 Firmwire Revision	17.1
User Connector	SMC **Caution**: Mating Connector engagement should not exceed 16in. oz. Torque maximum.
Maximum Switchable Voltage (Signal to Ground)	30VDC, 100VAC RMS

Maximum Switchable Current Per Channel	1.5ADC, 1.5A RMS
Maximum Switchable Power Per Channel	60W DC, 60VA AC, 60W RF Power
DC Performance	
Path Resistance	<1Ω
AC Performance	
Bandwidth, (-3 dB, 50Ω Termination)	1.3 GHz
Insertion Loss, (50Ω Termination)	<.50dB at 100MHz <1.5dB to 500 MHz <2.0dB to 1GHz
Crosstalk Across Groups (50Ω Termination)	<-100dB to 100MHz <-80dB to 500MHz <-60dB to 1GHz <-50dB to 1.3GHz
Isolation Between Channels (50Q Termination)	<-80dB at 100MHz <-65dB at 500MHz <-55dB at 1GHz <-40dB at 1.3GHz
VSWR (50Q Termination)	1.1:1 at 100MHz 1.25:1 at 500MHz 1.75:1 at 1GHz 1.75:1 at 1.3GHz
Switching Time	<10mS
Cooling Requirements	
Airflow	4 litres/sec
Backpressure	0.5mmH_2O
Power Requirements (I_{pm})	
+5 V	0.4A (2.8A with Option 01)
+12 V	10 mA per relay
Weight	1.17 Kg (2.59 lb) without Option 01 1.29 Kg (2.87 lbs) with Option 01

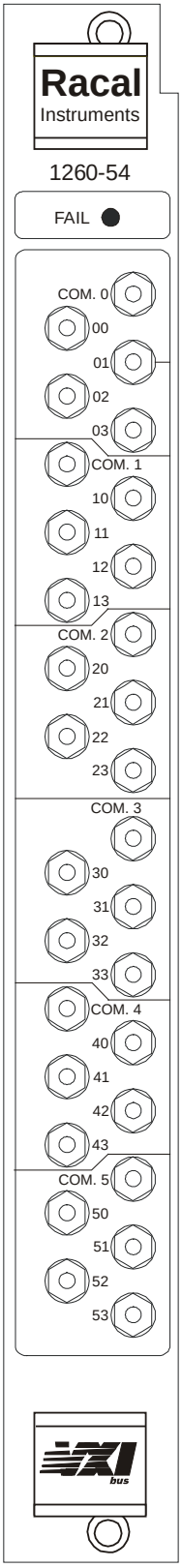

Figure 1-3, 1260-54 Front Panel

Chapter 2

INSTALLATION INSTRUCTIONS

Unpacking and Inspection

1. Remove the 1260-54 module and inspect it for damage. If any damage is apparent, inform the carrier immediately. Retain shipping carton and packing material for the carrier's inspection.

2. Verify that the pieces in the package you received contain the correct 1260-54 module option and the 1260-54 Users Manual. Notify Customer Support if the module appears damaged in any way. Do not attempt to install a damaged module into a VXI chassis.

3. The 1260-54 module is shipped in an anti-static bag to prevent electrostatic damage to the module. Do not remove the module from the anti-static bag unless it is in a static-controlled area.

Option 01 Installation

Installation of the Option 0 1 into the 1260-54 is described in the Installation section of the 1260 Series VXI Switching Cards Manual.

Module Installation

Installation of the 1260-54 Switching Module into a VXI mainframe, including the setting of DIP switches, is described in the Installation section of the 1260 Series VXI Switching Cards Manual. The ID byte DIP switches, SW1-5 and SW 1-6, should be set OFF.

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Chapter 3

MODULE SPECIFIC SYNTAX

1260-54 Commands

The 1260-54 RF Multiplexer supports the OPEN, CLOSE, PSETUP, RESET and PDATAOUT commands.

NOTE:

The 1260-54 Coaxial switching module is supported by the Option 01 Operating Systems at Revision levels 3.1 and above.

Syntax

The module specific syntax for the 1260-54 RF Multiplexer is as follows:

OPEN

OPEN <module address>.<channel>[;<module address>.<channel>]

where <module address> is the address.

<channel> is the relay to be closed to connect an input to the output.

Note that Channels remain closed until opened by an OPEN command.

The range of values for <channel> is:

00-03
10-13
20-23
30-33
40-43
50-53

CLOSE

The Module Specific Syntax for the CLOSE command is the same as for the OPEN command. Note each group of <channel> values contains five values. Using the highest value in each group, 04, 14, 24 etc, will give a connection to a "not connected" pin, i.e., open the path from input to output. This has the same effect using an OPEN command.

Connections between input and output are mutually exclusive within a group in the switch module. A CLOSE command will open an existing connection and close the new connection. An OPEN command will open any existing connection in the group and open circuit the Common connection.

The 1260-54 is restricted to the Break-Before-Make sequence mode.

PSETUP

The PSETUP command causes the specified module setup to be transmitted to the VXI Controller. The syntax used is:

PSETUP <module address>[;<module address>][;<module address>] where <module address> is the address.

The responses to the PSETUP command for the 1260-54 multiplexer is as follows:

<module address>. 1260-54 COAXIAL SWITCHING MODULE
<module address>.BBM
<module address>.END

PDATAOUT

The PDATAOUT command causes the specified module to transmit the CLOSED state of the relays fitted to the switching module to the 1260 Controller. The syntax used is:

PDATAOUT <module address>[.<module address>] [;<module address>]

The responses to the PDATAOUT command is as follows:

<module address>.1260-54 RF MULTIPLEXER
<module address>.<channel>[,<channel>] [,<channel>]
<module address>.END

The range of values for <channel> is:

00-03,10- 13,20-23,30-33,40-43 and 50-53.

Note that connections to the "not connected" pins within a group are not displayed.

Chapter 4

OPTIONAL HARNESS ASSEMBLIES

The following harness assemblies are used to connect 1260-54 to Freedom Series Test Receiver Interfaces.

Each harness documentation consists of an assembly drawing, parts list, system wire list and wire list.

407291, Virginia Panel, Inc. Series VP90 Interface Harness 4-3

407292, TTI Testron, Inc. Interface Harness 4-8
(TTI Receiver must be above chassis)

For more information on the complete line of Test Receiver Interface solutions, contact our Customer Support Department.

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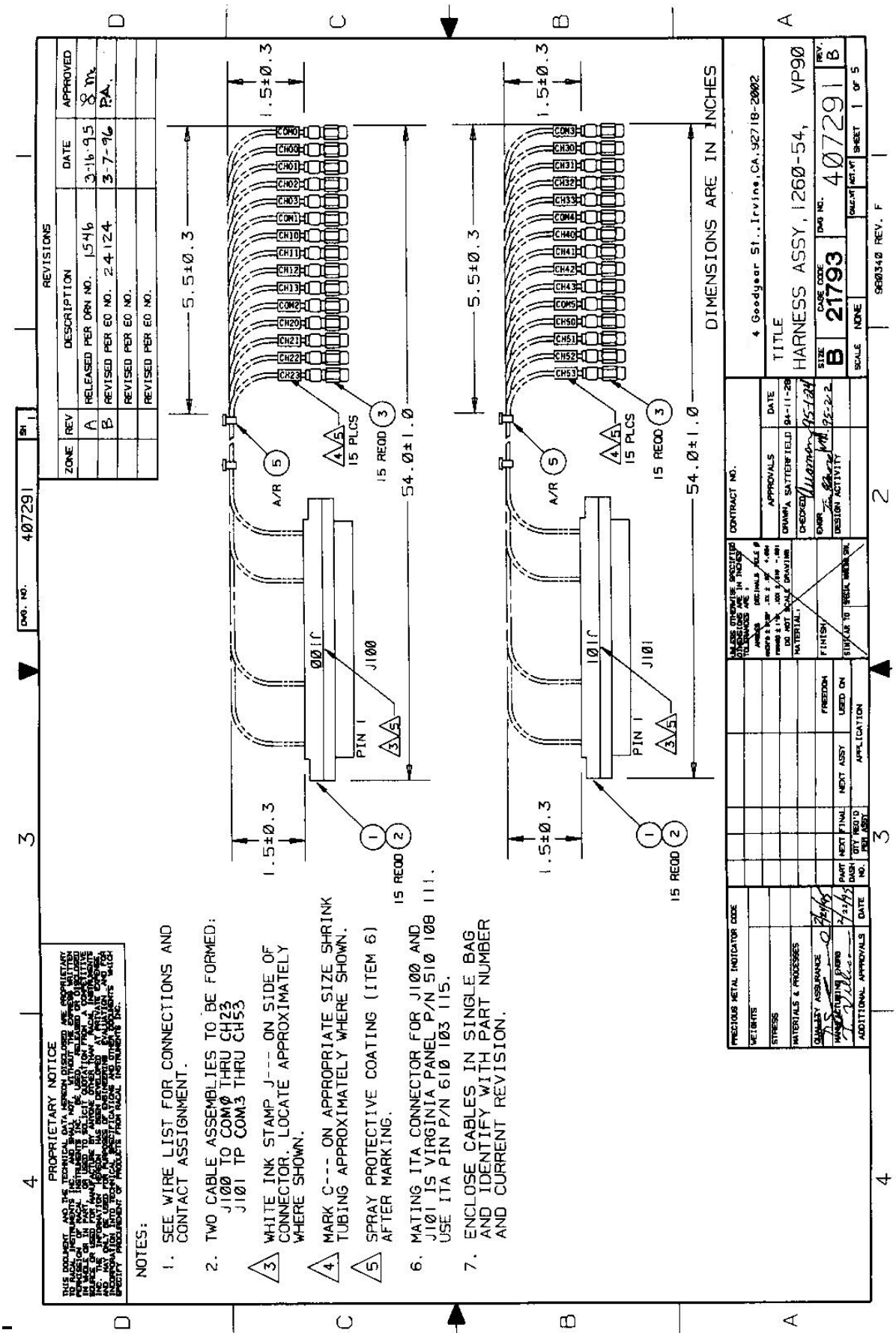
PROPRIETARY NOTICE
NOTES:
1. SEE WIRE LIST FOR CONNECTIONS AND CONTACT ASSIGNMENT.
2. TWO CABLE ASSEMBLIES TO BE FORMED: J100 TO COM0 THRU CH23 J101 TP COM3 THRU CH53
3 WHITE INK STAMP J--- ON SIDE OF CONNECTOR. LOCATE APPROXIMATELY WHERE SHOWN.
4 MARK C--- ON APPROPRIATE SIZE SHRINK TUBING APPROXIMATELY WHERE SHOWN.
5 SPRAY PROTECTIVE COATING (ITEM 6) AFTER MARKING.
6. MATING ITA CONNECTOR FOR J100 AND J101 IS VIRGINIA PANEL P/N 510 108 111. USE ITA PIN P/N 610 103 115.
7. ENCLOSE CABLES IN SINGLE BAG AND IDENTIFY WITH PART NUMBER AND CURRENT REVISION.
REVISIONS
ZONE REV DESCRIPTION DATE APPROVED
A RELEASED PER DRN NO. 1546 3-16-95
B REVISED PER EO NO. 24124 3-7-96
REVISED PER EO NO.
REVISED PER EO NO.
DIMENSIONS ARE IN INCHES
5.5±0.3
1.5±0.3
54.0±1.0
15 REQD
15 PLCS
A/R
PIN 1
J100
J101
4 Goodyear St., Irvine, CA. 92718-2002
TITLE
HARNESS ASSY, 1260-54, VP90
SIZE B
CAGE CODE 21793
DWG NO. 407291
REV. B
SCALE NONE
SHEET 1 OF 5
980340 REV. F
DWG. NO. 407291

ENGINEERING PARTS LIST

ITEM	BIN	PART NO.	DESCRIPTION	QTY	REFERENCE
1		602201-008	CON-RCV-PLG019C.---S-VP90	2	J100-J101
2		602201-807	PATCHCORD,MINI-COAX,50OHM 60"	30	W/J100-J101
3		600483	CON-CXL-PLG-1SD.----S	30	CH00-COM5
4					
5		610777	TIE-CA-LKG-.062-.075	A/R	
6		910541	POLYURETHANE CONF. COAT	A/R	

DOC. NO. 407291

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DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-54C, VP90	A	21793	407291	B
	DRN		SHEET 2 of 5	

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
	BLK AA (J100)	Uxx-SLOT yy (E1-E15)	CABLE	407291		SYSTEM WIRE LIST
	BLK AA (J101)	Uxx-SLOT yy (E16-E30)	CABLE	407291		

This system wirelist serves as a template for incorporating this harness assembly into the overall system wirelist. It does not in any way affect the fabrication of this harness assembly.

DOC. NO. 407291

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DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-54C, VP90	A	21793	407291	B
	DRN		SHEET 3 of 5	

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
1	J100-1 (602201-008)	E1 (600483)	COAX	602201-807	54"	CHANNEL 00
2	J100-2 (602201-008)	E2 (600483)	COAX	602201-807	54"	CHANNEL 01
3	J100-3 (602201-008)	E3 (600483)	COAX	602201-807	54"	CHANNEL 02
4	J100-4 (602201-008)	E4 (600483)	COAX	602201-807	54"	CHANNEL 03
5	J100-5 (602201-008)	E5 (600483)	COAX	602201-807	54"	COM 0
6	J100-6 (602201-008)	E6 (600483)	COAX	602201-807	54"	CHANNEL 10
7	J100-7 (602201-008)	E7 (600483)	COAX	602201-807	54"	CHANNEL 11
8	J100-8 (602201-008)	E8 (600483)	COAX	602201-807	54"	CHANNEL 12
9	J100-9 (602201-008)	E9 (600483)	COAX	602201-807	54"	CHANNEL 13
10	J100-10 (602201-008)	E10 (600483)	COAX	602201-807	54"	COM 1
11	J100-11 (602201-008)	E11 (600483)	COAX	602201-807	54"	CHANNEL 20
12	J100-12 (602201-008)	E12 (600483)	COAX	602201-807	54"	CHANNEL 21
13	J100-13 (602201-008)	E13 (600483)	COAX	602201-807	54"	CHANNEL 22
14	J100-14 (602201-008)	E14 (600483)	COAX	602201-807	54"	CHANNEL 23
15	J100-15 (602201-008)	E15 (600483)	COAX	602201-807	54"	COM 2
16	J100-16 NO CONNECT					
17	J100-17 NO CONNECT					
18	J100-18 NO CONNECT					
19	J100-19 NO CONNECT					
20	J101-1 (602201-008)	E16 (600483)	COAX	602201-807	54"	CHANNEL 30
21	J101-2 (602201-008)	E17 (600483)	COAX	602201-807	54"	CHANNEL 31
22	J101-3 (602201-008)	E18 (600483)	COAX	602201-807	54"	CHANNEL 32
23	J101-4 (602201-008)	E19 (600483)	COAX	602201-807	54"	CHANNEL 33
24	J101-5 (602201-008)	E20 (600483)	COAX	602201-807	54"	COM 3
25	J101-6 (602201-008)	E21 (600483)	COAX	602201-807	54"	CHANNEL 40

DOC. NO. 407291

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DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-54C, VP90	A	21793	407291	B
	DRN			SHEET 4 of 5

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
26	J101-7 (602201-008)	E22 (600483)	COAX	602201-807	54"	CHANNEL 41
27	J101-8 (602201-008)	E23 (600483)	COAX	602201-807	54"	CHANNEL 42
28	J101-9 (602201-008)	E24 (600483)	COAX	602201-807	54"	CHANNEL 43
29	J101-10 (602201-008)	E25 (600483)	COAX	602201-807	54"	COM 4
30	J101-11 (602201-008)	E26 (600483)	COAX	602201-807	54"	CHANNEL 50
31	J101-12 (602201-008)	E27 (600483)	COAX	602201-807	54"	CHANNEL 51
32	J101-13 (602201-008)	E28 (600483)	COAX	602201-807	54"	CHANNEL 52
33	J101-14 (602201-008)	E29 (600483)	COAX	602201-807	54"	CHANNEL 53
34	J101-15 (602201-008)	E30 (600483)	COAX	602201-807	54"	COM 5
35	J101-16 NO CONNECT					
36	J101-17 NO CONNECT					
37	J101-18 NO CONNECT					
38	J101-19 NO CONNECT					

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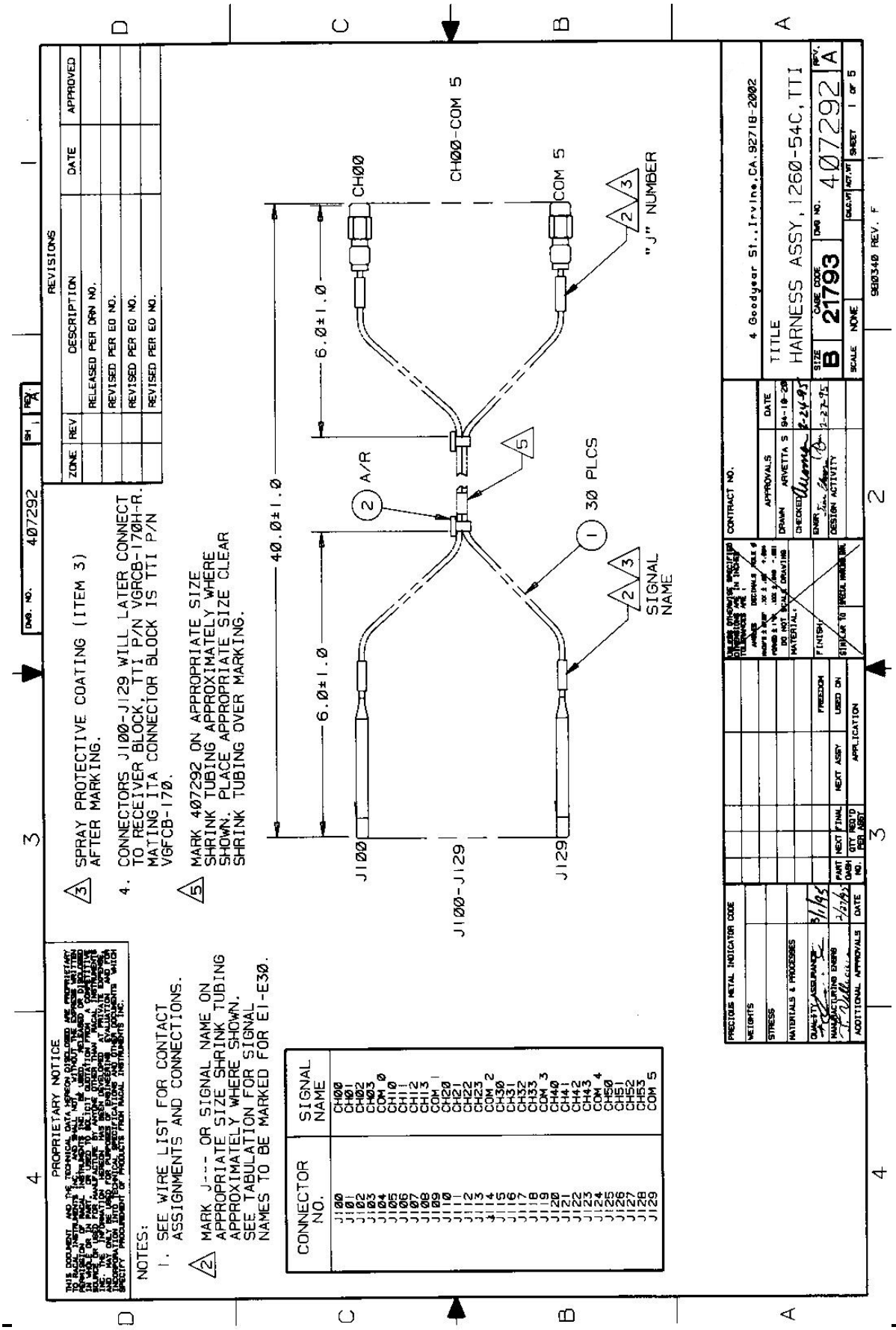
DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-54C, VP90	A	21793	407291	B
	DRN		SHEET 5 of 5	


REVISIONS
ZONE REV DESCRIPTION DATE APPROVED
RELEASED PER DRN NO.
REVISED PER EO NO.
REVISED PER EO NO.
REVISED PER EO NO.
DWG. NO. 407292 SH 1 REV A
PROPRIETARY NOTICE
NOTES:
1. SEE WIRE LIST FOR CONTACT ASSIGNMENTS AND CONNECTIONS.
2 MARK J--- OR SIGNAL NAME ON APPROPRIATE SIZE SHRINK TUBING APPROXIMATELY WHERE SHOWN. SEE TABULATION FOR SIGNAL NAMES TO BE MARKED FOR EI-E30.
3 SPRAY PROTECTIVE COATING (ITEM 3) AFTER MARKING.
4. CONNECTORS J100-J129 WILL LATER CONNECT TO RECEIVER BLOCK, TTI P/N VGRCB-170H-R. MATING ITA CONNECTOR BLOCK IS TTI P/N VGFCB-170.
5 MARK 407292 ON APPROPRIATE SIZE SHRINK TUBING APPROXIMATELY WHERE SHOWN. PLACE APPROPRIATE SIZE CLEAR SHRINK TUBING OVER MARKING.
CONNECTOR NO. SIGNAL NAME
J100 CH00
J101 CH01
J102 CH02
J103 COM 0
J104 CH10
J105 CH11
J106 CH12
J107 CH13
J108 COM 1
J109 CH20
J110 CH21
J111 CH22
J112 CH23
J113 COM 2
J114 CH30
J115 CH31
J116 CH32
J117 CH33
J118 COM 3
J119 CH40
J120 CH41
J121 CH42
J122 CH43
J123 COM 4
J124 CH50
J125 CH51
J126 CH52
J127 CH53
J128 COM 5
J129
CH00
CH00-COM 5
COM 5
"J" NUMBER
6.0±1.0
40.0±1.0
A/R
30 PLCS
SIGNAL NAME
J100
J100-J129
J129
4 Goodyear St., Irvine, CA. 92718-2002
TITLE
HARNESS ASSY, 1260-54C, TTI
SIZE B
CAGE CODE 21793
DWG NO. 407292
REV. A
SCALE NONE
SHEET 1 OF 5
980340 REV. F
CONTRACT NO.
APPROVALS
DRAWN ARVETTA S 94-10-20
CHECKED 12-27-95
ENGR. 12-27-95
DESIGN ACTIVITY
PRECIOUS METAL INDICATOR CODE
WEIGHTS
STRESS
MATERIALS & PROCESSES
QUALITY ASSURANCE 3/1/95
MANUFACTURING ENGRG 2/27/95
ADDITIONAL APPROVALS DATE
PART DASH NO. NEXT FINAL QTY REQ'D PER ASSY NEXT ASSY
APPLICATION
FINISH
USED ON
MATERIAL
DO NOT SCALE DRAWING
FINISH
GIDI/CAR TO
REGULATION DIR.

ENGINEERING PARTS LIST

ITEM	BIN	PART NO.	DESCRIPTION	QTY	REFERENCE
1		407263	CABLE ASSY, COAX/SMC,TTI	30	
2		610777	TIE-CA-LKG-.064-.075	A/R	
3		910541	POLYURETHANE CONF. COAT	A/R	

DOC. NO. 407292

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DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-54C, TTI	A	21793	407292	A
	DRN		SHEET 2 of 5	

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
	BLK AAx PN 01 (J100)	Uxx-SLOT yy (CH00)	CABLE	407292		SYSTEM WIRE LIST
	BLK AAx PN 02 (J101)	Uxx-SLOT yy (CH01)	CABLE	407292		
	BLK AAx PN 03 (J102)	Uxx-SLOT yy (CH02)	CABLE	407292		
	BLK AAx PN 04 (J103)	Uxx-SLOT yy (CH03)	CABLE	407292		
	BLK AAx PN 05 (J104)	Uxx-SLOT yy (COM 0)	CABLE	407292		
	BLK AAx PN 06 (J105)	Uxx-SLOT yy (CH10)	CABLE	407292		
	BLK AAx PN 07 (J106)	Uxx-SLOT yy (CH11)	CABLE	407292		
	BLK AAx PN 08 (J107)	Uxx-SLOT yy (CH12)	CABLE	407292		
	BLK AAx PN 09 (J108)	Uxx-SLOT yy (CH13)	CABLE	407292		
	BLK AAx PN 10 (J109)	Uxx-SLOT yy (COM 1)	CABLE	407292		
	BLK AAx PN 11 (J110)	Uxx-SLOT yy (CH20)	CABLE	407292		
	BLK AAx PN 12 (J111)	Uxx-SLOT yy (CH21)	CABLE	407292		
	BLK AAx PN 13 (J112)	Uxx-SLOT yy (CH22)	CABLE	407292		
	BLK AAx PN 14 (J113)	Uxx-SLOT yy (CH23)	CABLE	407292		
	BLK AAx PN 15 (J114)	Uxx-SLOT yy (COM 2)	CABLE	407292		
	BLK AAx PN 16 (J115)	Uxx-SLOT yy (CH30)	CABLE	407292		
	BLK AAx PN 17 (J116)	Uxx-SLOT yy (CH31)	CABLE	407292		
	BLK AAx PN 18 (J117)	Uxx-SLOT yy (CH32)	CABLE	407292		
	BLK AAx PN 19 (J118)	Uxx-SLOT yy (CH33)	CABLE	407292		
	BLK AAx PN 20 (J119)	Uxx-SLOT yy (COM 3)	CABLE	407292		
	BLK AAx PN 21 (J120)	Uxx-SLOT yy (CH40)	CABLE	407292		
	BLK AAx PN 22 (J121)	Uxx-SLOT yy (CH41)	CABLE	407292		
	BLK AAx PN 23 (J122)	Uxx-SLOT yy (CH42)	CABLE	407292		
	BLK AAx PN 24 (J123)	Uxx-SLOT yy (CH43)	CABLE	407292		
	BLK AAx PN 25 (J124)	Uxx-SLOT yy (COM 4)	CABLE	407292		

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DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-54C, TTI	A	21793	407292	A
	DRN		SHEET 3 of 5	

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
	BLK AAx PN 26 (J125)	Uxx-SLOT yy (CH50)	CABLE	407292		
	BLK AAx PN 27 (J126)	Uxx-SLOT yy (CH51)	CABLE	407292		
	BLK AAx PN 28 (J127)	Uxx-SLOT yy (CH52)	CABLE	407292		
	BLK AAx PN 29 (J128)	Uxx-SLOT yy (CH53)	CABLE	407292		
	BLK AAx PN 30 (J129)	Uxx-SLOT yy (COM 5)	CABLE	407292		

This system wirelist serves as a template for incorporating this harness assembly into the overall system wirelist. It does not in any way affect the fabrication of this harness assembly.

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DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-54C, TTI	A	21793	407292	A
	DRN			SHEET 4 of 5

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
1	J100	CH00	COAX	407263	40"	CHANNEL 00
2	J101	CH01	COAX	407263	40"	CHANNEL 01
3	J102	CH02	COAX	407263	40"	CHANNEL 02
4	J103	CH03	COAX	407263	40"	CHANNEL 03
5	J104	COM 0	COAX	407263	40"	COM 0
6	J105	CH10	COAX	407263	40"	CHANNEL 10
7	J106	CH11	COAX	407263	40"	CHANNEL 11
8	J107	CH12	COAX	407263	40"	CHANNEL 12
9	J108	CH13	COAX	407263	40"	CHANNEL 13
10	J109	COM 1	COAX	407263	40"	COM 1
11	J110	CH20	COAX	407263	40"	CHANNEL 20
12	J111	CH21	COAX	407263	40"	CHANNEL 21
13	J112	CH22	COAX	407263	40"	CHANNEL 22
14	J113	CH23	COAX	407263	40"	CHANNEL 23
15	J114	COM 2	COAX	407263	40"	COM 2
16	J115	CH30	COAX	407263	40"	CHANNEL 30
17	J116	CH31	COAX	407263	40"	CHANNEL 31
18	J117	CH32	COAX	407263	40"	CHANNEL 32
19	J118	CH33	COAX	407263	40"	CHANNEL 33
20	J119	COM 3	COAX	407263	40"	COM 3
21	J120	CH40	COAX	407263	40"	CHANNEL 40
22	J121	CH41	COAX	407263	40"	CHANNEL 41
23	J122	CH42	COAX	407263	40"	CHANNEL 42
24	J123	CH43	COAX	407263	40"	CHANNEL 43
25	J124	COM 4	COAX	407263	40"	COM 4
26	J125	CH50	COAX	407263	40"	CHANNEL 50
27	J126	CH51	COAX	407263	40"	CHANNEL 51
28	J127	CH52	COAX	407263	40"	CHANNEL 52
29	J128	CH53	COAX	407263	40"	CHANNEL 53
30	J129	COM 5	COAX	407263	40"	COM 5

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DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-54C, TTI	A	21793	407292	A
	DRN		SHEET 5 of 5	